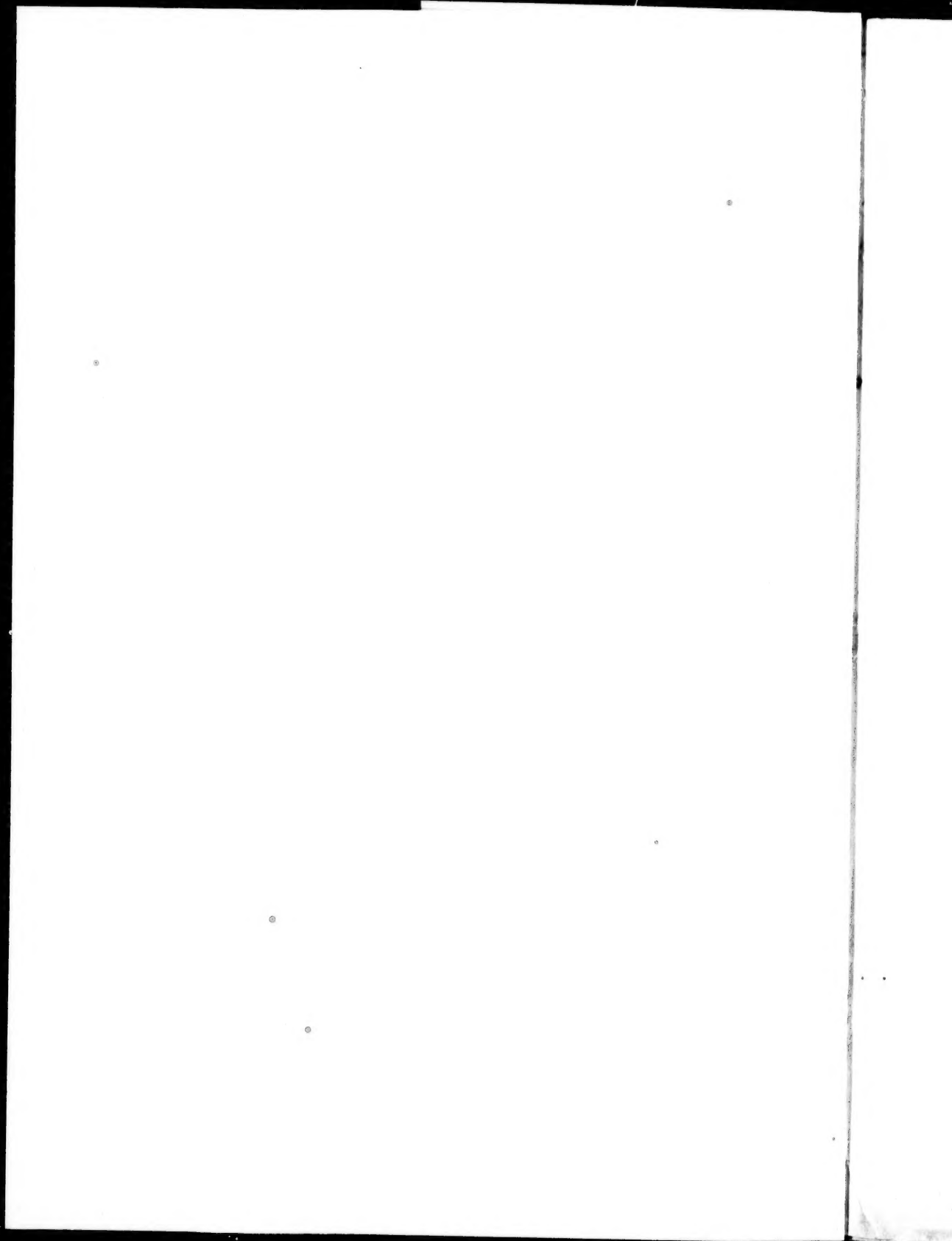




ANNUAL ADDRESS

DELIVERED

PROFESSOR JACK, A.M., PRESIDENT.

AT THE

FREDERICTON ATHENÆUM.

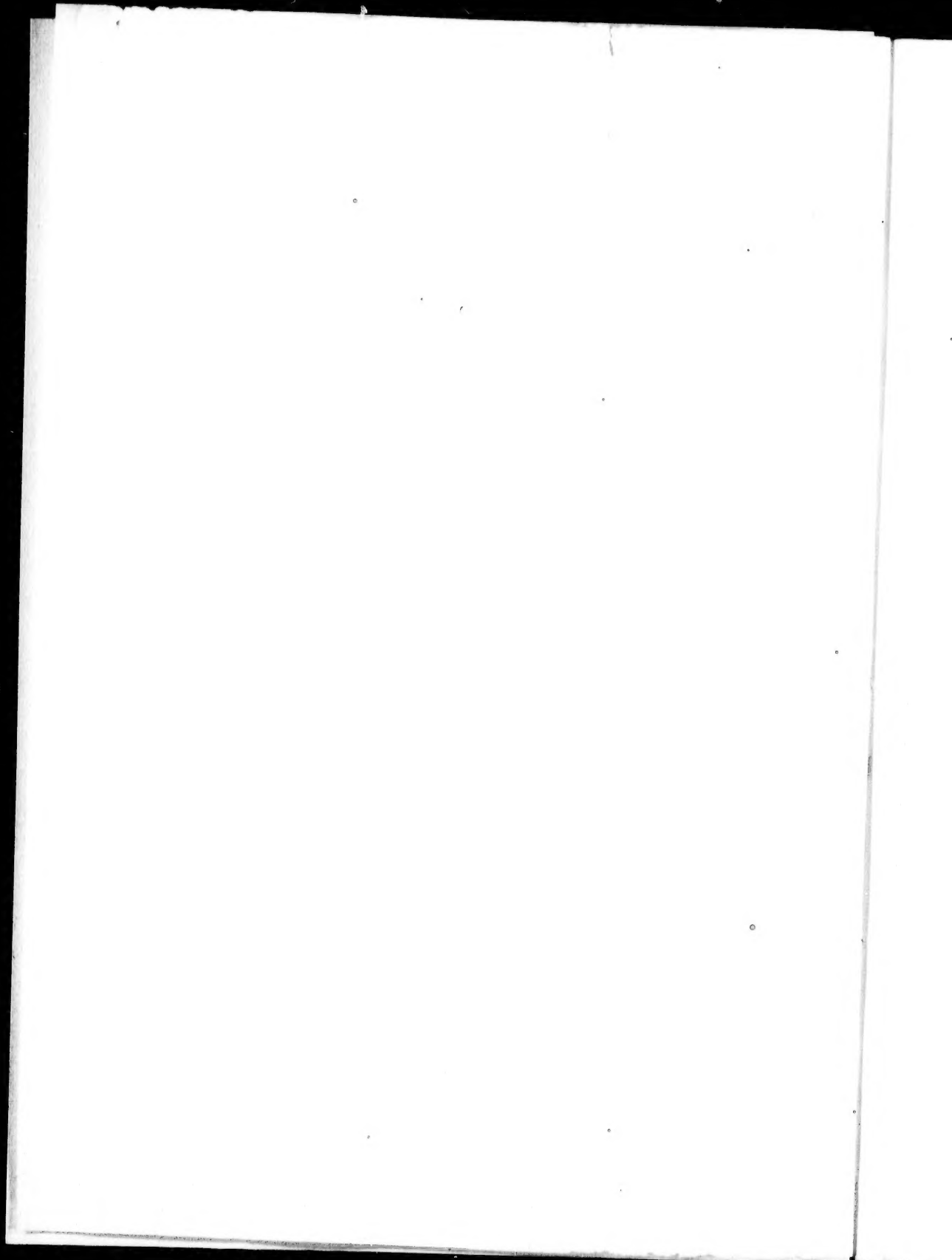
FEBRUARY 20, 1854.

PRINTED AT THE REQUEST OF THE SOCIETY

FREDERICTON

J. SIMPSON, PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY

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ANNUAL ADDRESS.

GENTLEMEN,

One of the duties pertaining to the high office which I have had the honor to hold among you, requires me, before descending from my temporary eminence, to furnish some account of the proceedings of the Society for the last twelve months. To this duty I have looked forward with no small degree of trepidation, knowing how much more worthily it could have been performed by many of those around me.

On reviewing the transactions of the past year, it gives me, I assure you, no small pleasure to be able to say that, in my opinion, the Society has well maintained its ground. Its ranks have been strengthened by the addition of several new members; and, although at our meetings we may have missed more frequently than we could have desired, or might have reasonably anticipated, some old familiar faces whose presence was wont to cheer and encourage us, yet upon the whole, the attendance has been pretty good.

If we consider the many disadvantages under which a Society such as the Fredericton Athenæum must necessarily labour, when established in so small a community as that to which we belong, we shall, I think, find ample reason to be satisfied with the measure of success it has hitherto enjoyed. It is true we have among us a more than average proportion of men well versed in history, general literature, and science; yet, taking them altogether, the number is so few, that we can scarcely afford to dispense with the hearty co-operation of a single individual. Of these too, every one, as might be expected in this new country, has to toil for his livelihood; and professional duties or the cares of business occupy so much of his time, that

he can devote but a scanty portion of it to other pursuits.— Moreover, as few of our members follow the same occupation, the course of reading and the train of reflection into which they will be naturally led, will be varied and dissimilar; and hence, the subjects brought before them must be of such a general nature as to secure, in some degree, the attention and interest of all. A learned disquisition on some dark point in Chronology, a scientific discussion of some yet unsettled question in Geology or Natural History, or an abstruse mathematical investigation of some problem in Philosophy, would be equally out of place in such an assemblage. Hence it is that we can perhaps lay no claim to having made any really original contribution to the stock of knowledge in the world. Nevertheless I am sure that many of the papers that have been laid before this Society during the seven years which it has now been in operation, would have been listened to with both pleasure and profit by associations of much higher pretensions. Nor ought it to be forgotten that we have in various ways, by publications and otherwise, attempted to do something for the general weal. For my own part, I am ready to confess that I have derived great benefit and satisfaction from our meetings; and I could adduce the published testimony of several of my predecessors in this chair, that in this respect I do not stand alone. I trust, therefore, that all will cordially unite, and zealously strive to maintain our yet youthful association in full life and vigour. Most of the Societies that now enjoy a world wide reputation, started into existence under no more promising aspects; and, why may not we, or, at all events, our successors, accomplish something to make the Fredericton Athenæum famous, and its origin worth enquiring into?

I reluctantly acknowledge that during the past year we have lived more within and for ourselves than heretofore. No Almanac, prepared and issued under our auspices, has apprised the public of our existence; nor have we made any further effort to benefit the mariner, and gain a better character for the Bay of Fundy, by urging those in authority to procure, through means of an accurate and systematic series of obser-

vations, reliable information regarding its harbours and tides. It is, however, gratifying to learn that there is some prospect of the last mentioned subject being taken up in the proper quarters, and meeting with the attention its importance deserves. Two years ago, the Government of the United States proposed to that of Great Britain that they should co-operate and collect facts for the elucidation of various oceanic phenomena, which not only possess general scientific interest, but the better understanding of which would tend vastly to the improvement of navigation. The proposal was favourably received; and lately the commanders of the vessels of both nations have been instructed to make regular observations on winds, tides, currents, temperature, and sundry other matters, in conformity with a plan prescribed by Lieutenant Maury of the United States Navy, who has for many years interested himself in such investigations. Last summer, Lieutenant Maury was sent to Europe for the express purpose of enlisting the Continental Powers in the same cause; and in the object of his mission, he has, I believe, been generally successful. Indeed, a discussion of the facts he had previously and not without much difficulty obtained, had already enabled him to reduce by nearly one half the voyages to Rio and to California; so that with such practical demonstration of the advantages to be derived from carrying out his scheme, it could not fail to be well received. It may be thought that these proceedings have a more immediate reference to the open ocean; but they will doubtless be gradually extended into every nook and corner of it, and we may fairly presume that the Bay of Fundy, which presents so many peculiar and highly interesting phenomena, will not be the last to be minutely examined. Nevertheless, it might hasten the matter, if at this in some respects favourable juncture, our merchants, shipbuilders and legislators would all bestir themselves, and exert their united influence to promote what so nearly concerns the commercial prosperity of the Province. When we first drew public attention to the subject, our views were approved of by His Excellency the Lieutenant Governor, and he was pleased to communicate them both to the Home

and the Provincial Authorities. But it is unnecessary for me to detain you longer on this point: those who are more directly interested ought now to take it up, as this Society cannot reasonably be expected to expend not only the time but the money which is requisite for pursuing it further.

I must now endeavour to give a short account of each of the papers that have been laid before the Society during the term of my Presidency.

In the month of March, the evening on which we were to have met happened to be exceedingly tempestuous; and although many members and several visitors had the courage to face the storm, the want of a single one to complete our perhaps rather numerous quorum prevented our proceeding to business.

At our meeting in the following month, the paper read was one which had been prepared by myself on the subject of "Weights and Measures." It had, as I then stated, been previously read before the Society of Arts in London; and I have since learned that it was honoured with a place on their premium list. In the first part of it, after making some general remarks on the origin of Weights and Measures, and the necessity for the early introduction of definite material standards, I attempted to give a brief sketch of their history, especially in England, down to the end of the 18th century.

Experience soon shows that in the same country there should not be allowed to exist a diversity of Weights and Measures; and hence we find that wherever, from a mixture of races or other causes, it has unhappily been introduced, legislation has at length seen the necessity of coming forward to effect its removal. But at the present stage of the world's progress, from the facilities of communication between the remotest regions of the earth being almost as great as those enjoyed by the different districts of the same kingdom scarcely a century ago, all nations are brought into closer proximity and fellowship, and such a frequent and general interchange of commodities

has been the consequence, that not only the philosopher but the mere man of business is becoming every day more and more sensible of the advantages that would be gained by the prevalence of an universal uniformity of Weights and Measures. On this point I am tempted to treat you with a quotation from a recent American writer, although I must confess that to ordinary mortals like myself the grandiloquence of the language is so dazzling as somewhat to obscure the sense.—“If a Millennial period for this world is ever to come, as many wise have dreamed and pious prayed, it must be preceded by one common language and one common system of Weights and Measures, as the basis of intercourse. And the way to this is to be built, not by the absorption of other and diverse systems into one, but rather by a compromise into which all may blend. When the Earth in her historical orbit shall have reached that point, (as it stood ere mankind were scattered from the plain of Shinar) and not till then, may we begin to hope that her revolutions will be stilled, and that before long the Weights and Measures of fleeting time will be merged and lost in the infinite scales and illimitable quantities of eternity.”

In the second part of my paper, I showed that men of science had long desired and anxiously sought a metrical unit whose value should be fixed and immutable, and which being derived from nature, might commend itself equally to the adoption of all nations, and thus relieve them from the many inconveniencies and perplexities which chance had originally introduced. I briefly explained the steps taken by the French to procure such a unit from the measurement of a quadrant of the meridian, and pointed out two very obvious errors that had been committed in the process of reduction. The more unpretending effort of the English to give fixity to their existing standards by determining their relation to the length of the second pendulum was also shown to have been equally unsatisfactory. Thus it appears that the dimensions of no natural unit have yet been ascertained with such absolute precision as would enable us to replace, simply by means of it, lost standards of measure.

In the third part, I examined in detail our Tables of Money, Weights, and Measures ; and advocated the introduction of the decimal system to a considerable extent. This required a change of nomenclature ; and although for the purpose of giving a sort of uniformity and symmetry to all the tables, and also of designating the relation of each denomination to its primary, I preferred the employment of general prefixes, yet whether owing to the genius of the English language, or my own want of invention, it must be confessed that the terms proposed are neither so simple nor euphonious as those which the French have so happily introduced into their metrical system.

As the unsatisfactory state of the Weights and Measures of this Province first induced me to take up the subject, I ought not to omit referring to the Bill which was passed during the last Session of our Legislature. This enactment gives a stability and certainty to our system which it did not formerly possess ; and although some may regret that, in deference to the order of things in the countries immediately surrounding us, we have been obliged to retain the old wine gallon as the standard of liquid capacity, and also the Winchester bushel as that of dry measure ; still the provision of the Bill which authorizes the buying or selling of all grains, roots, &c., by weight, renders this diversity less important. The abolition of heaped measure must also be regarded as a step in the right direction. I have likewise been given to understand that the Government has sent an order to Troughton and Simms of London, to prepare a superior set of standards to be kept at Head Quarters, and sixteen other sets with less pretensions to extreme accuracy, for the use of the different Counties.

At our meeting in April, Dr. Robb favoured us with a paper on Decimal Coinage. He ably insisted upon the many advantages of such a system, and urged the expediency of its speedy adoption. After enumerating various points which ought to be taken into consideration in attempting to effect the change, and showing that through want of attention to one or other of these, many erroneous views had been promulgated, he pro-

ceeded to state the practical difficulties with which the subject was encumbered, and then showed how, in his opinion, they might best be smoothed over. He contended that English coins should have good English names; and that the silver Crown piece possessed the highest claims to be selected as the unit of account. He thought the hundredth part of it would be a convenient coin, and sufficiently small for all the ordinary purposes of life; and that by adopting the centesimal scale, as would naturally be done, all sums could be expressed in two denominations. Furthermore, he showed that the Crown was nearly identical in value with several coins of various nations, one or two of which are perhaps better known and more widely circulated than any others are ever likely to be.

The advantages of the decimal principle are so numerous and obvious that it is rapidly gaining ground among civilized nations. Indeed, at the present day, it has been adopted by probably one half of the human race. It is established in France, Holland, and Belgium; in Portugal, Greece, Sardinia, and some of the Swiss Cantons; and prevails throughout the vast empire of Russia, and the populous regions of China. It has, moreover, found footing in Persia and Egypt, and is fast penetrating into the Ottoman dominions; and is, as you well know, used all over the United States, Mexico, Central America, and the Brazils. Great Britain also has at length and after much discussion taken it into favour. There, it has been settled that the Pound sterling is to be retained as the unit of account; and, already a two shilling piece, denominated a *Florin* has been issued from the Mint, and become a current coin of the realm. It has, I believe, been proposed by the Committee of the House of Commons appointed to consider the matter, to call the tenth of the Florin, or the hundredth of the Pound, a *Cent*, and the tenth of the latter a *Mil*. Now, throughout all British America, the introduction of the two last names would occasion endless perplexity and confusion, as these terms have already been appropriated to coins of much smaller value, with which our position has necessarily rendered us familiar. On this point, therefore, I hope that no definite

and irrevocable conclusion has yet been arrived at. Besides, it would be exceedingly cumbersome to have to express a sum of money by four denominations, Pounds, Florins, Cents, and Mils; and in fact, experience has taught us that they would never all be employed. We could not, as in the United States, drop the last, because the hundredth part of the Pound is not sufficiently small for the minor transactions of business; but we might, I think, dispense with the word Cent, and advantageously substitute in place of Mil the term *Milin*, from its similarity in sound to Florin, and also as expressive of its relation to the primary unit. But if a good old Saxon name is to be preferred, I would suggest *Mite* as an appropriate designation for our lowest coin; though some might probably think that by retaining the word *Farthing*, the masses would be more readily induced to adopt the new system. On this plan, accounts would be kept in three denominations, Pounds, Florins, and Milins, Mites, or Farthings, the last being counted as high as one hundred. The present shilling and six pence would still remain in circulation as convenient coins, being the half and quarter florin, or 50 and 25 mites respectively.

Your time will not allow me to discuss minor details, or to enquire what new coins would be necessary; but before leaving this interesting subject I would remark that although in the English, the French, and other national scales, the actual value of the unit is and will probably ever continue different, yet if a common principle, such as the decimal, pervades all, the methods of comparing them become much more simple and expeditious: and further, if the same principle were likewise introduced into the diverse systems of Weights and Measures, all calculations connected with them would be greatly facilitated; and the memory also would be relieved from the grievous load which it must now attempt to carry.

When we met in June, we had the pleasure of listening to a paper on "American Antiquities," prepared and read by the Rev. Charles Coster. His observations were chiefly confined to an account of the social and religious conditions of Mexico

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and Peru, at the period of the conquest of these countries by the Spaniards. He described the complicated form of government established among the Mexicans, their progress in legislation, agriculture, fortification, and many of the mechanical arts; and remarked upon their picture writing, their system of Arithmetic, and their wonderful attainments in Astronomy. After contrasting such indications of a high state of civilization with the grossness of their mythology, and the revolting rites of their religion, he carefully examined the many conflicting hypotheses that have been formed respecting their origin: and on the whole, seemed to incline to the notion of their intimate connection with the Shepherd Kings of Egypt.

It is interesting to observe how intimately the Serpent has been intertwined with the superstitions of various nations. In the old World we find it playing a conspicuous part in Egypt, Greece, Assyria, and China, and in every country peopled by the Celtic race.* In the new, we trace it among the ancient monuments on the banks of the Mississippi and its tributaries, the carvings on the altars of the Natches, the paintings of the Mexicans, and the temples of Central America. Among the Egyptians the *Cobra* was the sign of royalty and power; and to the Mexicans the *feather-headed-rattle-snake* conveyed the same idea, and was also the peculiar symbol of their Sun-God.

The existence of mighty nations enjoying an advanced state of cultivation in America at the time of its discovery, fills us with astonishment; but when we find that the Mexicans, who had erected stupendous edifices that rivalled those of Egypt, as well as the Peruvians, who, at a time when there were no public highways in Great Britain, except such as were relics of Roman greatness, had constructed admirable roads thousands of miles in length, over lofty mountains, and across frightful ravines,—that these, I say, were but of yesterday, and probably inferior in every respect when compared with the Toltecs, or with the inhabitants of the mysterious cities of Cen-

* See "Stukeley's Stonehenge and Abury."

tral America, who had nearly if not entirely vanished from the earth, and left not even a name behind them ; and when, moreover, from the monuments of the Mississippi valley, and similar remains that stretch into Pennsylvania and the northern part of New York, and even as far as Oregon, we obtain silent but incontrovertible evidences of a once numerous and powerful, but long since utterly extinct people, who must have been far superior to the rude hunter tribes which roamed through the forests of North America 300 years ago, our wonder and curiosity are raised to the highest pitch, and questions of the greatest importance in an archæological and ethnological point of view are immediately suggested. What affinities had these nations to one another, and to those of the old world ? Where are we to look for their origin ? To what cause can we attribute the ruin and decay of the Toltecs, and how shall we account for the final disappearance of the Mound builders, and the highly civilized communities of the central regions of the continent. It has been conjectured, and not without some show of reason, that the race of the mounds was the primitive stock from which came the various semi-civilized nations which formerly inhabited Central America, the Sierras of Mexico, and the plains of Peru. But whence came that wonderful people who have left scattered over such a vast extent of country so many imposing monuments of their skill and industry ? We cannot believe that they were indigenous, or sprung from a family created for the express purpose of peopling the so called New World. The book of Revelation, as it is commonly interpreted, seems plainly to assert that all mankind are descended from a single pair ; but, as the difficulties with which the subject is confessedly surrounded have unhappily betrayed some persons into the opinion that there are three or more *races* of one species, it is matter of congratulation to every devout believer to have his faith confirmed by the independent testimony of the book of nature. We are glad therefore to accumulate evidence from every quarter, and to be able to call upon Anatomy, Physiology, History, Philology, and General Science to marshal forth such master witnesses to the truth as Blumenbach,

Tiedeman, Weber, Muller, Prichard, Latham, and Humboldt, with a host of others whom it would be tedious to name. The best authorities are agreed that all the original inhabitants of America belong to the same *variety* of man as the Hindoos: and assuming Asia to have been the cradle of the whole human race, the passage thence could have been effected by several routes; and doubtless the transit occurred at a very early period, and civilization attained its fullest developement independently. The fluctuations in civilization may be accounted for on grounds similar to those whereby we explain the great social and moral changes that have taken place in various portions of Europe and Asia within the limits of authentic history.

Vixere fortes ante Agamemnona
Multi; sed omnes illacrymabiles
Urgentur ignotique longa
Nocte, carent quia vate sacro.

When we consider the vast numbers of the better classes of Mexicans that perished at the commencement of the Spanish conquest; and that European ferocity was more especially directed against the Aztec priests, who in a measure monopolized the learning of the country; and when, moreover, we learn from the chroniclers of the time that the first Spanish Archbishop of Mexico, (Don Juan de Zumarraga, a pious man of "heroic virtues," who is said to have confirmed no fewer than 14,500 Indians), considered the hieroglyphical paintings by which every kind of knowledge was transmitted from generation to generation, as nothing better than idolatrous books of Magic, and therefore caused them to be collected in great quantities, and burnt in "mountain heaps"; and that he was everywhere diligently assisted in the work of destruction by his inferiors; we cannot wonder at the degradation which speedily followed, and at the gloom which envelopes the history of the ancient nations of this continent.

Indeed, the whole Indian tribes are rapidly disappearing from North America, and we ought to neglect no opportunities of learning all we can respecting them, while they yet remain.

Catlin found abundant proof that their number at the time the Anglo Americans first arrived was upwards of 14,000,000; yet Captain Lefroy in a valuable communication to the Canadian Institute, furnished statistics which show that in the whole of British North America, which is equal in extent to 1-20th of the habitable globe, there are at present no more than 125,000; and that in the United States, Texas, Mexico, and Oregon, the aggregate is not over 250,000.

It is much to be desired that some gentlemen of this Society would undertake the task of collecting information regarding the Indians of this Province, their traditions and antiquities.

After our customary Summer recess, we were in September indebted to our indefatigable Secretary for coming forward and favouring us with an oral lecture on the "Microscope." He traced the history of that instrument from the simple convex lens down to the most improved form to which the compound microscope has been brought in the present day. He explained and clearly illustrated by diagrams and lenses, various difficulties that had to be encountered, such as those arising from spherical and chromatic aberrations, a limited field of view, and want of sufficient illumination; and showed how and to what extent each of these defects had been remedied. The purchase of a fine compound Achromatic Microscope for the College, enabled the lecturer to give point to what he said about the wonders it revealed, by gratifying us with an examination of several of the test objects by which it was accompanied.

The Telescope and the Microscope are constructed upon a common principle, which will be readily understood. You all know that if a luminous object is placed in front of a convex lens, an image of it will be found at a certain distance behind the lens. If the object is gradually moved from the lens, it will be seen that the image approaches it on the other side, and becomes smaller and smaller as the distance diminishes. In the case of the Telescope, the object, the sun for instance, is very remote, and the image formed is smaller than the actual

size of that luminary in the ratio of the lesser distance at which it is found behind the lens. On the other hand, if we now return to our experiment, and bring the object gradually nearer and nearer to the lens, it will be seen that the image recedes from it on the other side, and that it becomes larger and larger as the distance increases. In the case of the Microscope, a small object is brought very near to the lens—within a fraction of an inch—and its image is formed at a comparatively great distance, and is therefore proportionately enlarged in dimensions. Having thus obtained these two images—the first much less than the object, and the second much greater—they are then treated in exactly the same manner in both the Telescope and Microscope, namely, examined by a magnifying lens or eye glass.

The impression left on the mind of the Christian philosopher by viewing the works of creation through the one or other of these instruments are so beautifully contrasted by Dr. Chalmers in the following passage, that I am sure you will pardon my taking this opportunity of bringing it under your notice. "The one," says that eminent divine, "led me to see a system in every star: the other leads me to see a world in every atom. The one taught me, that this mighty globe, with the burden of its people and of its countries, is but a grain of sand in the vast field of immensity. The other teaches me, that every grain of sand may harbour within it the tribes and the families of a busy population. The one told me of the insignificance of the world I tread upon. The other redeems it from all its insignificance; for it tells me that, in the leaves of every forest, and in the flowers of every garden, and in the waters of every rivulet, there are worlds teeming with life, and numberless as are the glories of the firmament. The one has suggested to me that, beyond and above all that is visible to man, there may lie fields of creation which sweep immeasurably along, and carry the impress of the Almighty's hand to the remotest scenes of the universe. The other suggests to me that, within and beyond all that minuteness which the aided eye of man has been able to explore, there may be a region of invisibles; and

that could we draw aside the mysterious curtain which shrouds it from our senses, we might there see a theatre of as many wonders as Astronomy has unfolded, a universe within the compass of a point so small as to elude the powers of the Microscope, but where the wonder-working God finds room for the exercise of all his attributes, where he can raise another mechanism of worlds, and fill and animate them all with the evidences of his glory."

Countless myriads of microscopic animalcules swarm in every body of water, whether salt or fresh, from the Equator to the Poles, and increase with such astonishing rapidity that not only is it certain that their absolute number far exceeds that of all other animals together, but it is even probable that their collective volume is also greater. Moreover, the shelly coverings with which many of them are encased, being composed either of lime, flint, or iron, retain their shape and structure for ages after the death of their tiny inmates, and are therefore constantly forming copious deposits at the bottoms of lakes, rivers, and seas. Of extensive strata of calcareous earth, stones, and rocks, deposited in this way, many examples might be adduced; but it will be sufficient to particularize one, in order to give some idea of the number and minuteness of these creatures. The Tripoli, or polishing slate of Bilin, which occupies a surface of great extent, and is as much as 14 feet in thickness, consists entirely of siliceous cases of animalcules; and, according to Professor Ehrenberg, each cubic inch of it contains on an average 41,000 millions of individuals. Of this enormous number, occupying such a small space, let us try to obtain a more accurate conception than the mere mention of it conveys. Estimating the population of Fredericton at 5000 persons, and supposing that each could count at the rate of 100 per minute, and was able to work without intermission for twelve hours a day, they would require a period of more than three years, before by their united efforts they could reach this number.

At our meeting in the month of October, after the usual routine of business, we had the pleasure of listening to Mr.

Roberts' paper "on the relations that exist between Science and Art." The subject embraces such a wide range, that the author expressed his regret that the limits of a single lecture prevented his discussing it so fully as he could have desired, or as the interest with which it is at present regarded, might appear to demand. As Science and Art have long been, and still are, variously defined, and rather loose and confused ideas generally prevail regarding their respective limits, he commenced by explaining the meaning he wished to be attached to them on the present occasion. The one he considered as the methodically arranged fruits of patient research and deep reflection: the other as the result of well directed practice. They are, however, so intimately related that neither can be separated from the other without injury to both. Their common field of operation is the material universe, which the almighty, wise and bountiful Creator has spread out for the investigation and use of his intelligent creatures. Of their mutual dependence and harmonious and rapid progress when united, and of their "unloveableness" when disjoined, Mr. Roberts furnished us with many interesting and striking examples from a variety of sources. This paper formed a most appropriate sequel to that on the Microscope,—an instrument which in its construction exhibits in a remarkable degree a combination of the most profound science with the highest artistic skill. To this happy union, both Astronomy and Microscopic knowledge are indebted for the great advances they have recently made.

So long as philosophers *assumed*, rather than ascertained by direct enquiry from nature, the several properties of matter, their learning was, not undeservedly, looked upon with contempt by practical men. But when they followed in the path pointed out by the illustrious Bacon, and recognized the truth of his maxim that "Nature is subjugated only by obedience," the value of their researches, even in a purely practical point of view, began to be slowly acknowledged. It is now admitted by every one who can pretend to any acquaintance with the subject, that no amount of mere manual dexterity can supply

the want of theoretical knowledge: and that, on the other hand, practice must be looked to for the foundations on which to build theories, and for data to confirm and perfect them. A more accurate knowledge of the qualities and functions of different bodies leading to improved processes in manufacturing industry, and the extensive introduction of complicated and delicate machines into all the mechanical and useful arts, are every day rendering muscular energy or brute strength less productive than the exercise of refined intellectual power. The London Exhibition seems to have convinced the people of Great Britain that, although they had attained an eminence of commercial and manufacturing prosperity unrivalled in any age of the world, they must, if they would retain it, put science in its proper place as the guide and director of art, and have recourse to all the aids and appliances which it can afford. "The whole of industrial competition," says Dr. Playfair, "is now resolved into a struggle to obtain a maximum effect by a minimum expenditure of power." British manufacturers are, therefore, becoming alive to the urgent necessity for some good and efficient system of industrial instruction; and no small stir is being made by the highest and most influential personages in the realm, to procure the establishment of such institutions as will effect this desirable object.

In the month of December, we were indebted to the Rev. Mr. Brooke for a paper entitled "*Horæ Mosaicæ*," the purpose of which was to show to what a surprising extent the leading facts of the Mosaic narrative were corroborated by the traditions of ancient and widely separated nations, and by the testimony of profane writers. By adopting a systematic division, and presenting under distinct heads the several points which he considered it most important to illustrate, the Rev. Gentleman brought to bear upon each in succession such a mass of concurrent evidence as could scarcely have been anticipated by those who had not made the matter a subject of special research. My not having done so forbids my attempting to follow in his footsteps, or to add anything to what he has advanced. As, however, the immediate object of his paper

allowed him to allude only incidentally to the manner in which the discoveries of modern science may be expected to attest the truth of the inspired record, I am tempted to say a few words on this point; more especially because the book of Revelation and the book of Nature—works of the same divine author—in place of establishing and confirming each other, as they undoubtedly will when rightly interpreted, are in many instances supposed by some to be in direct opposition. This fallacy generally arises from not reflecting that each has in view a separate and distinct object. The one being intended to teach the whole of mankind religion, is written in such popular yet sublime language as to be easily understood by the most humble as well as the most enlightened, and not in such strict scientific terms as to satisfy—even granting that such a thing were possible—each and all of the successive and ever-varying phases of scientific discovery. It tells us that all things had a beginning, and that this beginning, no matter how far back, occurred in *time*, and was the result of the fiat of an eternal, self-existent, and independent Creator. After enunciating this grand and important truth, it passes over with little or no notice all intermediate events as irrelevant to the main end in view, and proceeds at once to give the history of God's dealings towards him to whom it is especially addressed, carefully and clearly pointing out man's high place in the creation, and the duties which it imposes. The other displays the power, wisdom, and beneficence of the Deity in the immensity, perfection, and harmony of his works, and opens to his intelligent creature, who was made but "a little lower than the angels," sources of the highest and purest delight, by affording a glorious field whereon he may find the most ennobling exercise for the great faculties wherewith he has been endowed, and which he was intended to train to higher and higher perfection.

Those who would have the Bible convey lessons in science as well as in religion, seem to forget the progressive nature of the former. Do they wish to find in the teachings of the Holy Scriptures a perfect accordance with the knowledge of the present day? May, or rather will not the very next gene-

ration prove that much of the now existing wisdom is only foolishness? Would any of the greatest philosophers that have ever lived, have presumed to affirm that more was known to him than remained unknown? Were a Newton or a Humboldt to answer the question, we are well assured that it would not be in the affirmative. Was it not better then, that the inspired narrative should have been so worded as to be intelligible to the simple and uncultivated people to whom it was first addressed? Would the Israelites, who were naturally hard of belief and prone to idolatry, have had their faith confirmed by being told that the solid earth on which were planted the great pyramids of Egypt, was a round ball spinning rapidly on its axis; that, properly speaking, the sun neither rose nor set; that the soft silvery light of the moon was not her own but borrowed from the lamp of day; and that each of the numberless stars that stud the firmament was a sun, the centre of a system of worlds each perhaps more grand and glorious than the tiny orb they inhabited.

In my opinion, strong proofs of the inspiration of the books of Moses are furnished by the facts, that while they convey a meaning acceptable to uninstructed minds which trust implicitly to appearances and the direct evidence of the senses, they are at the same time so readily susceptible of such a construction as to negative none of the established principles of science; and that there are nowhere found in them any of the fallacies of the Egyptian philosophy, though we are told that "Moses was learned in all the wisdom of the Egyptians," and would, therefore, had he been left to himself, have been naturally anxious to display the knowledge he had acquired.

To those who wish to see how well the discoveries of modern science may be reconciled with the sacred narrative, I would recommend the perusal of "Hitchcock's Religion of Geology," or "Dr. John Pye Smith's Geology and Scripture."

Last month, I regret that a variety of unfavourable circumstances prevented our coming together in such numbers as to make a quorum. Those, therefore, who in spite of obstacles

favoured us with their presence, were, at the end of the year as at its commencement, obliged to separate without obtaining the object for which they had assembled.

It will be observed that in my remarks upon each paper, I have carefully abstained from eulogizing the author, however sensible I may have been of his merits. I have, in every case, been more concerned about the matter than the man; and wherever I thought I could introduce some additional food for reflection, I have attempted to do so.

I have no change to propose in the organization of the Society, as I can see none of any importance that could be made without entirely altering its constitution; and I am unwilling that this should be done.

The Secretary will furnish you with a statement of our financial resources, and connected therewith I shall probably, when the occasion offers, make some suggestions.

Gentlemen, allow me to employ the last brief moments of my authority among you in exhorting you to be more earnest in your endeavours to promote the welfare and success of this Society. I well remember the ardour of your zeal at our first meeting. Do not, I entreat you, allow it to cool, and bring upon us the common, and often, I fear, well deserved reproach of being too fond of following after novelties! As our monthly meetings cannot be considered a severe tax upon the time of any of us, attendance upon them ought to be regarded as a duty, with the performance of which we should allow nothing short of pressing necessity to interfere. Every one of you, I am sure, wishes the Society continued existence and prosperity. Let each, then, labour as if its maintenance depended upon his individual exertions; for, that this is pretty nearly the true state of the case, all of you will on reflection be ready to admit.
